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=> d his; d tot ibib abs

     (FILE 'HOME' ENTERED AT 11:22:01 ON 30 MAY 2007)

     FILE 'REGISTRY' ENTERED AT 11:22:27 ON 30 MAY 2007
L1             SCREEN 963 AND 1006
L2             STRUCTURE UPLOADED
L3             QUE L2 AND L1
L4           0 S L3 FUL
L5             SCREEN 963 AND 1006
L6             STRUCTURE UPLOADED
L7             QUE L6 AND L5
L8           0 S L7 FUL

     FILE 'STNGUIDE' ENTERED AT 11:26:56 ON 30 MAY 2007

     FILE 'REGISTRY' ENTERED AT 12:05:42 ON 30 MAY 2007
L9             SCREEN 963 AND 1006
L10            STRUCTURE UPLOADED
L11            QUE L10 AND L9
L12          0 S L11 FUL
L13            SCREEN 963 AND 1006
L14            STRUCTURE UPLOADED
L15            QUE L14 AND L13
L16          0 S L15 FUL

     FILE 'CAPLUS' ENTERED AT 14:03:55 ON 30 MAY 2007
L17    2811450 S PREPN/IA
L18      42040 S PEG#/IA
L19     132227 S ESTERIF?/IA
L20          0 S (HYDROLYTIC(3W)ENYZME#)/IA
L21       4920 S (HYDROLYTIC(3W)ENZYME#)/IA
L22         67 S L19(4W)L18
L23          0 S L22 AND L21
L24     865162 S ?ENZYME/IA
L25          6 S L22 AND L24

     FILE 'STNGUIDE' ENTERED AT 14:08:00 ON 30 MAY 2007


YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:y



L25  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2005:124416  CAPLUS
DOCUMENT NUMBER:          143:224809
TITLE:                    Important factors affecting enzymatic functions of PEG
                          microspheres containing lipase complexes
AUTHOR(S):                Sawae, Hidekazu; Sakoguchi, Akihiro; Nakashio,
                          Fumiyuki; Goto, Masahiro
CORPORATE SOURCE:         Department of Applied Chemistry, Faculty of
                          Engineering, Sojo University, Kumamoto, 860-0082,
                          Japan
SOURCE:                   Journal of Chemical Engineering of Japan (2005),
                          38(1), 54-59
                          CODEN: JCEJAQ; ISSN: 0021-9592
PUBLISHER:                Society of Chemical Engineers, Japan
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB    PEG microspheres immobilizing lipase complexes were prepared using an
      oil-in-water-in-oil (O/W/O) multiple emulsion.  The performance of the PEG
      microspheres with respect to esterification in isooctane was examined by
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changing the preparation conditions. We found that the mol. weight of PEG, the PEG concentration, the pH and the type of salts in the aqueous buffer solution are predominant factors influencing the enzyme activity in organic media. These preparation conditions significantly affect enzymic functions of PEG microspheres containing lipase complexes. The lipase-containing PEG microspheres provide a similar enzymic activity to that of the lipase complex itself dissolved in organic solvents. The PEG microspheres containing lipase complexes show a heat-resistant property. The PEG microspheres, therefore, exhibit a higher enzyme activity than the lipase complex without a microsphere at all the reaction temps. tested. In enantioselective esterification, the PEG microspheres show high enantioselectivity in isooctane.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:442547 CAPLUS
DOCUMENT NUMBER: 121:42547
TITLE: Synthesis of poly(ethylene glycol) derivatives with different branchings and their use for protein modification
AUTHOR(S): Fuke, Ichiro; Hayashi, Toshio; Tabata, Yasuhiko; Ikada, Yoshito
CORPORATE SOURCE: Research Center for Biomedical Engineering, Kyoto University, Sakyo-ku, Kyoto, 606, Japan
SOURCE: Journal of Controlled Release (1994), 30(1), 27-34
CODEN: JCREEC; ISSN: 0168-3659
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Monomethoxy linear poly(ethylene glycol) (PEG) with a terminal hydroxy group was coupled to monobromoacetic acid, protocatechuic acid and gallic acid to synthesize one branched (PEG1), two branched (PEG2) and three branched PEG derivs. (PEG3) each having only one carboxyl group in a mol. The PEG derivs. were chemical fixed to trypsin through amidation with its amino groups using the PEG carboxyl group. The PEG-modified trypsins with different degrees of modification were subjected to three enzymic reactions. When casein hydrolysis and trypsin autolysis were performed using the PEG-modified trypsins, both of the enzymic reactions were strongly suppressed with the PEG modification. On the other hand, inhibition of trypsin activity by trypsin inhibitor was scarcely affected by the PEG modification, whereas trypsin digestion by pepsin was greatly protected by the PEG modification in the order of PEG3>PEG2>PEG1. All these results could be consistently explained in terms of steric hindrance brought about by fixation of the PEG chains on the trypsin mol.

L25 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:268267 CAPLUS
DOCUMENT NUMBER: 120:268267
TITLE: Lipase-catalyzed synthesis of oleic acid esters of polyethylene glycol 400
AUTHOR(S): Janssen, Giselle G.; Haas, Michael J.
CORPORATE SOURCE: East. Reg. Res. Cent., ARS, Philadelphia, PA, 19118, USA
SOURCE: Biotechnology Letters (1994), 16(2), 163-8
CODEN: BILED3; ISSN: 0141-5492
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Quant. esterification of polyethylene glycol (PEG) 400 using oleic acid and Lipozyme was achieved in hexane. The effects of temperature, nature of acyl donor, substrate ratio, enzyme quantity and reaction time upon PEG esterification were examined Best acylation was achieved with oleic acid or oleic anhydride, at 42°, whereas

triolein and Me oleate were less effective. Nearly-selective production of either PEG monooleate or PEG dioleate was achieved. Lipozyme was still 80% active after 5 reaction cycles.

L25 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:87149 CAPLUS
DOCUMENT NUMBER: 104:87149
TITLE: Immobilization of Protaminobacter rubrum and its use in converting sucrose to isomaltulose
INVENTOR(S): Haese, Wilfried; Egerer, Peter; Schmidt-Kastner, Guenter; Perrey, Hermann
PATENT ASSIGNEE(S): Bayer A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 26 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 3416140	A1	19851107	DE 1984-3416140		19840502
EP 160253	A2	19851106	EP 1985-104764		19850419
EP 160253	A3	19861008			
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE					
FI 8501698	A	19851103	FI 1985-1698		19850429
JP 60234583	A	19851121	JP 1985-91288		19850430
DK 8501963	A	19851103	DK 1985-1963		19850501
PRIORITY APPLN. INFO.:			DE 1984-3416140	A	19840502
			DE 1984-3427889	A	19840728

AB The immobilization of P. rubrum in a water-soluble high-mol.-weight (>400) polymer having >2 polymerizable groups is accomplished in the presence of a photosensitizer. Thus, P. rubrum was incubated in a medium containing sugar syrup, corn steep liquor, and (NH4)2HPO4 at 31° yielding cells having a sucrose mutase activity of 9.1 units/mL. The cells were isolated from the fermentation broth and added to a solution containing irgacure and a polymerizable acrylate resin (prepared in 2 steps by esterification of PEG (mol. weight 1550) with acrylic acid followed by reaction of the resulting ester with isophorondiisocyanate). The mixture is polymerized to a film (500 μm thick) by using high-pressure Hg lamps. The film was then cut into small pieces and placed in a 1-L column. A sucrose solution is passed through the column (130 mL/h) at 30° to obtain a 70-80% conversion of sucrose to isomaltose. After 40 days no decrease in enzyme activity was observed

L25 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1985:501414 CAPLUS
DOCUMENT NUMBER: 103:101414
TITLE: Chemical reactions by polyethylene glycol-modified enzymes in chlorinated hydrocarbons
AUTHOR(S): Takahashi, Katsunobu; Ajima, Ayako; Yoshimoto, Takayuki; Okada, Masato; Matsushima, Ayako; Tamaura, Yutaka; Inada, Yuji
CORPORATE SOURCE: Lab. Biol. Chem., Tokyo Inst. Technol., Tokyo, 152, Japan
SOURCE: Journal of Organic Chemistry (1985), 50(18), 3414-15
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 103:101414
AB In various kinds of organic solvents, ester and acid-amide bonds were formed by lipase and chymotrypsin, resp., after modification of the enzymes with an amphipathic polymer, polyethylene glycol. The modified enzymes are

easily soluble in organic solvents, such as C6H6 and chlorinted hydrocarbons, and the reaction proceeded in a transparent state, not in an emulsified state, at 25-37°. Among the organic solvents, the highest activity of ester synthesis or acid-amide formation was observed for 1,1,1-trichloroethane (26 μmol/min/mg protein for ester synthesis, 0.64 mol/min/mg protein for acid-amide bond formation). A similar phenomenon was observed for catalase modified with this polymer.

L25 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:546661 CAPLUS
DOCUMENT NUMBER: 101:146661
TITLE: Modified lipase having high stability and various enzymic activities in benzene, and its re-use by recovering from benzene solution
AUTHOR(S): Yoshimoto, T.; Takahashi, K.; Nishimura, H.; Ajima, A.; Tamaura, Y.; Inada, Y.
CORPORATE SOURCE: Lab. Biol. Chem., Tokyo Inst. Technol., Tokyo, 152, Japan
SOURCE: Biotechnology Letters (1984), 6(6), 337-40
CODEN: BILED3; ISSN: 0141-5492
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 101:146661
AB Lipoprotein lipase, modified with polyethylene glycol and dissolved in C6H6, catalyzed various reactions of ester synthesis, ester exchange, and aminolysis. This modified enzyme had a high stability; 50% of the initial enzymic activity was retained after an .apprx.3-mo storage period in C6H6 at room temperature The enzyme can be repeatedly reused after recovering from C6H6 solution The enzyme ppts. on addition of n-hexane (or petroleum ether).

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